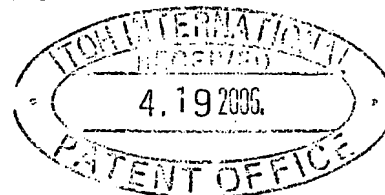


PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY



To:
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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing (day/month/year)	18.04.2006
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Applicant's or agent's file reference
R05165PCT

FOR FURTHER ACTION

See paragraph 2 below

International application No. PCT/JP2005/018397	International filing date (day/month/year) 28.09.2005	Priority date (day/month/year) 30.09.2004
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International Patent Classification (IPC) or both national classification and IPC
Int.Cl. **H02M3/155** (2006.01)

Applicant
RICOH COMPANY, LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Date of completion of this opinion		17.11.2005	
Name and mailing address of the ISA/JP Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan		Authorized officer	3V 8718
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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

10/580133
AP9 Rec'd PCT/PTO 19 MAY 2006
International application No. PCT/JP2005/018397

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed
 - ☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material
 - ☐ on paper
 - ☐ in electronic form
 - c. time of filing/furnishing
 - ☐ contained in the international application as filed
 - ☐ filed together with the international application in electronic form
 - ☐ furnished subsequently to this Authority for the purposes of search
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/018397

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-12	YES
	Claims		NO
Inventive step (IS)	Claims	2-12	YES
	Claims	1	NO
Industrial applicability (IA)	Claims	1-12	YES
	Claims		NO

2. Citations and explanations:

This opinion is based on the following documents D1-D3.

D1: JP 2002-262554 A (LINEAR TECHNOLOGY CORP) 13.09.2002, Fig.2

D2: WO 2003/058804 A2 (KONINKLIJKE PHILIPS ELECTRONICS N.V.) 17.07.2003, Claim 1, Fig.1

D3: JP 2002-543728 A (KONINKLIJKE PHILIPS ELECTRONICS N.V.) 17.12.2002, Claim 1

D1 discloses a multi phase switching regulator with two switching devices (54,55) to supply an output Out (see fig. 1). External clocks (OSC) are supplied to the regulator to produce driving signals for the switching devices (54,55). Similar technology is disclosed in D2.

The subject matter of Claim 1 that the switching regulator transfers its mode into stand-by mode by detecting suspension of the external clocks differs from D1 (D2) in respect of the manner of the transfer to stand-by mode.

D3 discloses that a signal processor transfers between active mode and sleep mode in reply to external clocks. Therefore, Claim 1 lacks inventive step according to D1- D3.

The subject matter of Claim 2-12 is not disclosed or not suggested in D1 -D3. Therefore, Claim 2-12 meet the requirement regarding novelty and inventive step.

The requirement regarding Industrial applicability of Claim 1-12 is clearly met.